

## Swimming Beach Monitoring Program

by Debra Bouchard

### What we do and why we do it

King County routinely monitors swimming beaches, working with Public Health–Seattle & King County (Public Health) and cities, to protect public health. This includes fecal coliform bacteria monitoring from mid-May through mid-September, and algal toxin monitoring from late May through the end of October.

On Mondays, samples are collected at specified swimming beaches (listed on web page shown above). Laboratory analysis for bacteria is completed within 24 hours and algal toxin results are done within three to four days.

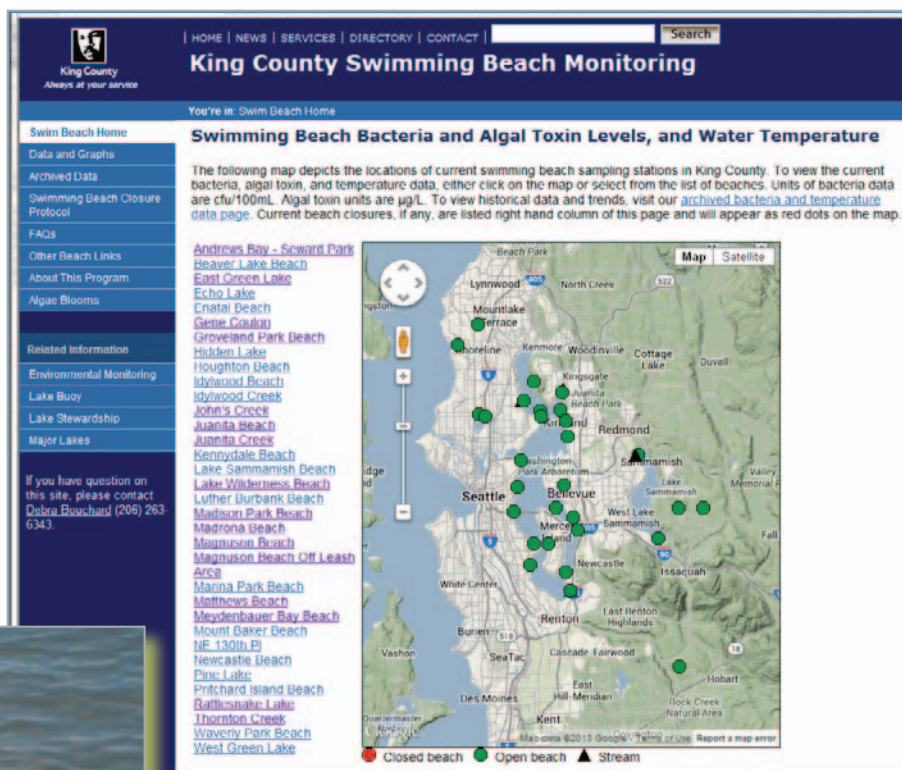
If any test results exceed guidance values, Public Health and the local jurisdiction managing the beach is notified. King County staff work with both Public Health and the affected jurisdiction to follow up and take appropriate action with established protocols. Public Health determines the public health implications and advises managing jurisdictions how to proceed. For more information about the program and to view data collected, please visit the King County Swimming Beach Monitoring Program website at <http://green.KingCounty.gov/SwimBeach>.



### Bacteria

Fecal coliform (FC) bacteria in lake waters indicate a higher probability that the water has been contaminated with fecal material from humans, birds or other animals. Although FC are usually not harmful themselves, they often occur with other disease-causing bacteria, such as E. coli, so their presence indicates a potential risk to human health.

For bacteria, the King County Swimming Beach Monitoring Program uses the Ten State Standard as protocol for beach closures. If the routine sample collected on Monday exceeds



Visit the [King County Swimming Beach Monitoring web page](http://green.KingCounty.gov/SwimBeach) for more information about the program.

the Ten State Standard the field crew will return to the beach that had the high value on Tuesday and collect three more samples. If this re-sampling confirms the high value, then Public Health along with the managing jurisdiction will take appropriate action – often a beach closure followed by periodic testing until the problem is resolved.

### Algal toxins

Cyanobacteria, also called blue-green algae, commonly grow in lakes and sometimes produce toxins. Toxicity is hard to predict, can't be identified visually, and only a lab test can confirm its presence. The two most common toxins in Washington waters are microcystin and anatoxin-a. Both have recreational guidance values set by the state. Microcystins affect the liver, while anatoxin-a affects the nervous system. These two cyanotoxins were added to the routine monitoring of swimming beaches in 2005.

If cyanotoxin results exceed state guidance levels, Public Health is contacted and protocols for further action at the lake are put into action. Depending on the concentration of algal toxin measured, the lake is posted with a “Caution” “Warning” or “Danger” sign, and the lake is sampled weekly until values are back below guidance levels.

The Swimming Beach Monitoring Program is one of several monitoring programs that are important to King County residents who value water quality and enjoy recreating in our shared water resources. These monitoring programs can be an important tool in identifying potential pollutant sources so that appropriate action can be taken.



*Blue-green algae bloom.*

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